REID JOHNSON, P.E.

Mr. Johnson has 30 years of experience in engineering and construction management. He has been responsible for a variety of projects ranging from the management and design of municipal engineering efforts including pump stations, reservoirs, pipelines, wells, SCADA control systems, , reclaimed water, sewer projects water system studies, master plans, construction phase services, and client and agency coordination, to large water and infrastructure projects with the Bureau of Reclamation and the Corps of Engineers. He supervised a Bureau of Reclamation Contract Administrations section including the oversight of correspondence, documents, contractor payments, claims analysis, and negotiations on earthfill dams, tunnels, major pipelines, and drainage projects.

EDUCATION

B.S., Civil Engineering,

Utah State University

PROFESSIONAL HISTORY

Bookman-Edmonston/Navigant Consulting Inc., Principal, 2002

Civiltec Engineering, Director of Engineering, 1997-2002

Boyle Engineering Corp., Project Manager/Design Team Leader, 1990-1997

Valley Engineering, Utah, Manager, 1982-1990

U.S. Bureau of Reclamation, Contract Administration Supervisor, 1980-1982

U.S. Army Corps of Engineers, Officer, 1972-1975

REGISTRATIONS

Registered Civil Engineer in California R.C.E. No. 49236

and Utah , R.C.E. No. 309114

PROFESSIONAL MEMBERSHIPS

American Water Works Association

Southern California Water Utilities Association

American Society of Civil Engineers

Air and Waste Management Association

WATER RESOURCES PROJECTS:

Central Utah Project Bureau of Reclamation, Ashley Valley Reservoir Company, Central Canal Company, Upper Canal Company, Bear River Water Conservancy District, Western Colorado Water Conservancy District.

Three new dams, two diversion structures, modifications to existing dams. Water tunnel, large diameter pipelines, canals, siphon, headwater structures. Feasibility studies, and preliminary engineering for new dam.

Evaluated three flood damaged river diversion dams. Designed and constructed repairs, modifications to one salvageable structure and additional structures to increase the flood by pass capacity, low flow diversion control, and off stream canal head gates, measuring weirs, return channel, and canal modifications to serve two canal companies. Designed a large diameter pipeline, crossing under the river, and utilizing larger jointly maintained structures at a better location, to serve the third canal system and make it less susceptible to flood damage.

Completed dam modifications on two earthfill dams at high mountain locations. This included rebuilding and rerouting a spillway on one and replacing a deteriorated outlet works on another along with placing additional dam embankment and erosion protection riprap. Participated with the Ashley Valley Reservoir Company and State Dams Safety Engineers in dam inspections and maintenance work.

Constructed improvements to an irrigation delivery canal in a mountainous area including sections of concrete pipeline, siphons, overflow and diversions structures, and erosion protection.

Preliminary engineering for earthfill dam at Blanchett Park in the eastern Utah. This included performing site investigations, survey of access roadway, dam site, borrow areas, and a hydrology analysis. Worked with the conservancy district, Forest Service, and State Engineers as well as dam design experts from another firm.

Study of Bear River drainage and water needs, water rights, proposed projects.

- Represented clients in water rights actions, was involved in a significant change to Utah water law and assisted in forming two water districts.

REPRESENTATIVE PROJECT EXPERIENCE (continued)

ENVIRONMENTAL PROJECT WORK

Completed the permitting and AB 2588 requirements for three wastewater treatment plants to satisfy the State and local district air quality regulations.

Project manager for the Edwards AFB wastewater treatment plant project environmental assessment, which included biological, cultural resources, and paleontologist resource evaluations in a new area. Worked with many environmental project personnel to protect endangered species and cultural resources.

WATER AND WASTEWATER TREATMENT PROJECTS

Project manager of all phases of $20 million tertiary wastewater treatment plant at Edwards Air Force Base, including: several preliminary engineering studies, design, permitting, surveying, aerial mapping, geotechnical, environmental assessment, value engineering, construction phase services, plant startup, training, and operation and maintenance specifications. Was the direct contact with Corps of Engineers and Air Force offices, several subconsultants, U.S. Geological Survey, and regulatory agencies.

Also was a design engineer on the new Edwards AFB tertiary wastewater treatment plant which was completed on an accelerated schedule, and included trunk sewer lines, headworks screening and grit removal, extended aeration biological reactors, secondary clarifiers, coagulation and filtration, disinfection, sludge pumping and sludge dewatering facilities, composting facility, chemical feed building, shop, effluent pump station, instrumentation and control system, and an administration building with laboratory. The project included demolition of the existing treatment plant and reuse of some facilities for pumping and alternative water disposal.

Project manager of Industrial Wastewater Collection and Treatment System project at the Naval Air Weapons Station, China Lake. This project included topographic mapping, engineering studies, value engineering/functional analysis, geotechnical investigation, bench scale testing of proposed treatment processes, and design of approved project. Completed a certified 40-hour value engineering workshop.

Project manager, City of Ridgecrest wastewater treatment plant expansion, and water reuse project, which involved extensive preliminary engineering, including evaluating wastewater reuse and disposal options and environmental and endangered species considerations.

Upgrade of wastewater treatment plant at Phillips Laboratory, new effluent disposal lagoons, lift station, and Compliance Study.

ENGINEERING REPORTS, STUDIES AND MASTER PLANS

Prepared several water system master plans. The most recent large water system master plans have been prepared for the, the City of Lakewood (2000) and the Valley County Water District (1999). Each master plan consisted of the compilation and fine-tuning of a water system computer model, analysis of the existing and ultimate water system and recommendations for capital improvements with financing methods. Performed hydraulic analysis and computer modeling of water systems since 1997.

Marshall Canyon Water Systems and Source Options Study, L.A. County

Preliminary Engineering Study (Navy PEP Process), identify objectives, design criteria, evaluate site and alternatives, environmental and regulatory compliance,

aerial mapping, surveying, and geotechnical, Industrial Wastewater Collection and Treatment System, NAWS China Lake

Value Engineering/Functional Analysis Study, Industrial Wastewater Collection and Treatment System, NAWS China Lake

Bench scale testing of proposed treatment processes and design criteria report, Industrial Wastewater Collection and Treatment System, NAWS China Lake.

Phillips Lab. WWTP regulatory compliance study and preliminary engineering

EAFB and Phillips Laboratory, Flood plain evaluations, developed storm water control solutions and designed channels.

EAFB Value Engineering study

EAFB energy conservation report, design data, and application for Utility rebate, which resulted in selection as a Department of Energy Showcase project.

EAFB Process operation manual for all treatment plant systems and processes.

EAFB prepared plant operations service contract specifications and documents.

EAFB Wastewater and sludge characterization report, testing, and treatment criteria.

EAFB Regulatory compliance and permitting plan.

EAFB WWTP site evaluation report of alternative sites.

EAFB Treatment process train comparison and evaluation report.

EAFB WWTP operating and process monitoring requirements plan.

EAFB Effluent and sludge disposal study: Developed extensive plans for reuse of treated water for landscape irrigation. Developed groundwater recharge/banking project for excess treated effluent.

EAFB Geotechnical investigations of project areas, and permeability of existing 250 acres of evaporation ponds.

REGULATORY AGENCY REPORTS AND PERMIT APPLICATIONS

EAFB Report of Waste Discharge Requirements, Lahonton Regional Water Quality Control Board

EAFB Authority to Construct Permit, Kern County Air Pollution Control Board.

EAFB Sludge Disposal Alternatives Report, Lahonton RWQCB and Kern County Environmental Health Department.

EAFB Title 22 Plant operations report to verify design regulatory compliance, Lahonton RWQCB and State Office of Drinking Water.

EAFB Title 22 Report of reclaimed water reuse, State Office of Drinking Water and Lahonton RWQCB.

Authority to Construct Permit, North of River Sanitary District, regional wastewater treatment plant, San Joaquin Valley Unified Air Pollution Control District.

CONSTRUCTION MANAGEMENT PROJECTS

U.S. Army Corps of Engineers, seven years construction experience on a variety of projects in three countries, including large infrastructure programs as Resident

Engineer.

U. S. Bureau of Reclamation Central Utah Project, construction of dams, tunnels, pipelines, drainage systems, roads, and buildings.

Valley Engineering, constructed eleven potable projects, two sewer system projects, and five water storage facility modifications and delivery system projects.

Senior construction engineer on twelve municipal or district projects with Boyle Engineering including large diameter pipelines, pump stations, water wells, water storage reservoirs, removal and installation of fuel tanks, and wastewater lagoons.

Ritchard earthfill dam and Highway 40 relocation project in Colorado.

Edwards WWTP construction phase services, including: partnering conferences, construction meetings, shop drawing review, RFI response, site inspections. Involved in plant startup, operator training program, and O & M Manuals.

Experienced in all phases of construction administration including cost control, scheduling, CPM networks, bid solicitation, contracts, and cost estimates. On the large Edwards WWTP project supervised the preparation of a detailed construction cost estimate using the Corps of Engineers MCACES computer program.

With Civiltec, he is the Senior Engineer providing and supervising bidding and construction phase services, design engineer reviews and coordination of critical elements, reviewing and approving shop drawings, evaluating changed conditions and solutions, responding to Contractor correspondence, preparing contract documents, and responsible for completing and signing as-built drawings.

AIRFIELDS, STREETS, PAVING

Khasab Airfield, Oman, new runway construction, asphalt paving, large concrete apron with airplane tie-downs, and on-site asphalt batch plant, and rock crushing.

King Khalid Military City, Saudi Arabia, asphalt, and concrete paving of airfield and streets, on-site batch plants, and quarry and crushing operations.

Edwards AFB, Ca. new roadway design and construction with new wastewater plant, and significant utility locating and street repair with new reclaimed water system.

Vincent Hill Feeders Project, Ca. pipeline construction in state highway and county streets.

NORSD Outfall Ca. 18 miles of 36 to 54 inch pipeline with excavation up to 25 feet and considerable road and street reconstruction.

Numerous other water and sewer projects that involved street work, and reconstruction to City, County and State standards, and acceptance.

RESERVOIRS

Responsible for the design and construction management of several steel and concrete reservoir projects in his career, including two welded steel reservoirs for Pepperdine University in their Graduate Campus project. A 1.6 MG Steel Potable Water Reservoir was designed to the standards of Los Angeles County Water Works District No. 29 for their use and included SCADA integration into both systems. A 100,000-gallon recycled reservoir became the controlling component of Pepperdine's landscape irrigation system and included relocation of a booster pump station hydropneumatic tank and control equipment

Other recent reservoir projects include:

- Newhall County Water District, four welded steel reservoirs totaling 3.5 MG.
- City of Azusa, Mountain Cove project 1.0 MG steel potable water reservoir.
- City of Claremont, Padua Hills project 0.5 MG steel potable water reservoir.
- City of Tehachapi, new 1 MG steel reservoir
- City of Bishop, new 1 MG steel reservoir,
- Antelope Valley East Kern Water Agency, new 2 MG steel reservoir, pump station, 20-inch transmission pipelines, telemetry system, corrosion control systems, new water treatment plant and prestressed concrete reservoir.
- Utah Public Water Systems Projects: new 1 MG reinforced concrete storage reservoirs for Upalco, Johnson Water District, Randlett Water District, Fruitland Water District, and Maeser Water District (2 ea)

PIPELINES

Was responsible for the design and construction of numerous pipeline projects including a complicated utility relocation program in the City of La Verne to accommodate the new below grade Freeway 30 project which severed eleven city streets and included: Installing 12, 18, and 24-inch waterlines in 6 casings through 8 Caltrans over crossing structures. Providing earthquake protection including flexible expansion joints isolation valves in vaults with motor operators and electronic remote control system. Installing 5 waterline and casings below the freeway grade. Connecting new waterline sections to the existing waterlines while accommodating existing new and temporary locations for all other utilities in the streets. Reconfigure service area pressure zones that were severed by the freeway, including new connection points, looped lines, and a new pressure reducing station. Coordinating with Caltrans offices during planning, design and construction phases.

Other La Verne waterline projects:

- Zone V pump station suction and delivery waterlines.
- Miscellaneous waterline package 1998.
- 1,200 linear feet of 12-inch ductile iron pipe in First Street

Other recent water pipeline projects include:

- Newhall County Water District, ductile iron waterlines up to 24-inch totaling over 40,000 feet.
- Pepperdine University, 5,000 linear feet of 12-inch steel pipe for the Graduate Campus Project
- California Domestic Water Company, 9,450 linear feet of 30-inch steel pipe
- Three Valleys Municipal Water District. 650 linear feet of 30-inch steel pipe with 450 linear feet of 42-inch steel casing for the 30-inch Miramar Transmission System Relocation Project, and Live Oak Spreading Basin and Import Water connection project, including regulating valve, meter,energy dissipater, and SCADA system.
- City of Azusa Light and Water Department: 12-inch steel pipe crossing of the Little Dalton Wash, and 24-inch well field pipeline project.
- San Gabriel Valley Municipal Water District Relocation of a 42-inch steel waterline to accommodate construction of Freeway 30 at Baseline Road,

including designing two 30-inch ductile iron pipe with flexible, restrained joints through 600 foot long casings in a Caltrans bridge structure that had a vertical curve.

- City of Bishop, rehabilitate 3 wells, new pipelines, water system and controls evaluations, and improvement recommendations.
- East Niles Community Services District, utilities relocations, waterlines, and improvement plan reviews, water source sanitary survey.
- Utah Public Water Systems Projects: including Maeser Water District, Fruitland Water District, Johnson Water District, Randlett Water District, Myton City, and Vernal City. Project Manager and design engineer for these water projects, which included; a total of 135 miles of new waterlines, two river crossings, drilled 1 new well, rehabilitation, and new pump stations on 4 wells. Developed one spring as a municipal water source, pressure reducing and pressure relief stations, new reservoir control valves.